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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,101	07/13/2000	David W. Sherrer	ACT-120	4072

7590 03/04/2002

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EXAMINER

ABRAMS, NEIL

ART UNIT	PAPER NUMBER
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2839

DATE MAILED: 03/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/615101

Applicant(s)

Examiner

Abrams

Group Art Unit

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-40 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-40 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2 sheets
- ☒ Notice of Reference(s) Cited, PTO-892 2
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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ng Claims 1-~~16~~ and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leaman in view of Byrum, Jiang, Mansour, Chande, Anthony, Boudreau, Benzoni, Basavanhally, Miller and Kato.

For claims 1-36 and 40 note Leaman sticks 12, 14 with notches 16. It would have been obvious to form the notches 16 in the sticks by laser or to form the sticks along with the groves from a large sheet by use of laser cutting since machining by laser is well known. Anthony, Mansour and Byrum are cited as examples. Laser cut notches are readable as being dry etched. Mansour, see col.1, lines 20-40 and col.3, lines 25-30. Also obvious to use dry or other type etching in view of Jiang and Kato, fig.9 .

The sticks 12, 14 surfaces (edges) are readable as being cleaved. Such features not shown to define structurally over such edges. In addition, it would have been obvious to form the Leaman sticks, prior to notching, from a stamped sheet as in Miller or form a large sheet as in Byrum, fig.5 or Boudreau, fig.5. The stick edges would then be cleaved or cut from the large sheet. Claims 5-11 relate to obvious variations. In addition, obvious to use alignment means of Chande at 27, 27 or Basavanhally at 16, or alignment recesses bumps as in Kato at 4, ~~4~~ (and corresponding recesses in sticks 1, 1a) and Jiang at 301 or as in Benzoni at 20, 16, 24. Also obvious to form the sticks with notches on both sides as in Miller.

For claim 37, and also for other claims, it would have been obvious to form the Leaman sticks 12, 14 from a single sheet or block as in Byrum, Boudreau, fig.5, and Kato, fig.9, to etch holes by laser as in Byrum, Anthony, etc... and then to cut or divide the sheet along "the line of

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holes" as in Boudreau, figs. 5, 6, Kato, fig. 9 and Byrum. The fibers would then be clamped between such sticks. Miller applied as above.

Claims 20-36 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Basavanhally or Kato either one alone or with Chande.

Basavanhally sticks 17, 18 and Kato chips 1a, 1b are etched to form notches. Term "cleaved" does not define structurally over surfaces of such sticks. *Obvious to use 27, 29 of Chande*

Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Byrum, Jiang and Chande.

Obvious to form fig.9 recesses 25a by laser (dry) etching in view of Byrum and Jiang, ~~to~~ to use the parts to form a cage as in Kato, figs.6, 12, 15, 16. Jiang and Chande applied as above.

Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Byrum, Kato, Boudreau and Chande.

It would have been obvious to form the Miller chips 10 from a single sheet or block with laser forming of holes as in Byrum and separating (cleaving) the chips from the sheet in view of Byrum, Kato, fig. 9 and Boudreau, figs. 5, 6. Chande applied as above. Also obvious to use alignment bumps 4, ~~4~~ of Kato and corresponding recesses.

In response to this office action, claim limitations at issue should be discussed in terms of new results or advantages produced thereby. *The "dry etching" limitation should be discussed. Which procedures are covered? These should also be noted in spec.*
Any inquiry concerning this communication should be directed to N. Abrams at telephone

number (703) 308-1729.

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Abrams/ek

02/27/02

N. Ol
N. L. / MMS
EXAMINER
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